

Application No. 10/007,288  
Amendment dated July 28, 2004  
Reply to office action of May 28, 2004

REMARKS/ARGUMENTS

The preceding amendments and following remarks are submitted in response to the Office Action of the Examiner mailed May 8, 2003. Claims 1-62, 64-67 remain pending. Claim 63 has been canceled without prejudice, and claims 66-67 have been added. Entry of this amendment and reconsideration by the Examiner to that end is respectfully requested.

On page 2 of the Office Action, the Examiner rejected claim 65 under 35 U.S.C. § 112, first paragraph. The Examiner states that the claimed subject matter was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. More specifically, the Examiner states that claim 65 recites: "the volume of the chamber remaining relatively constant over the desired operating temperature range of the one or more devices." The Examiner states that support for this feature was not found in the specification, either literally or by way of illustration.

After careful review, Applicants must respectfully disagree. Adequate description under the first paragraph of 35 U.S.C. § 112 does not require literal support for the claimed invention. . . Rather, it is sufficient if the originally-filed disclosure would have conveyed to one having ordinary skill in the art that an appellant had possession of the concept of what is claimed. *Ex parte Parks*, 30 USPQ 2d 1234, 1236-37 (B.P.A.I. 1993). To satisfy the description requirement of section 112, first paragraph, an application must contain sufficient disclosure, expressly or inherently, to make it clear to one skilled in the art that the appellant was in possession of the

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subject matter claimed. *In re Eickmeyer*, 202 USPQ 655, 662 (C.C.P.A. 1979). If a person of ordinary skill in the art would have understood the inventor to have been in possession of the claimed invention at the time of filing, even if every nuance of the claims is not explicitly described in the specification, then the adequate written description requirement is met. *In re Alton*, 37 USPQ 2d 1578, 1584 (Fed. Cir. 1996).

During a telephonic interview with the Examiner on July 8, 2004, the undersigned pointed out that, at least in some embodiments, the chamber 16 is formed between two wafers 13 and 14, and the chamber 16 may have a reduce pressure therein, and in some cases, a vacuum. For example, with respect to the illustrative embodiment shown in Figures 1a and 1b, the present specification states:

Cavity 16 is effected by a recess of about 125 microns into wafer 14 having a border 18. It is this cavity that is outgassed to result in a cavity vacuum. Top cap 14 is about 430 microns thick and chip 13 is about 500 microns thick. Seal ring 15 is a composition of 90 percent lead and 10 percent indium. Plug 12 is about 20 microns thick and is a composition of 50 percent lead and 50 percent indium.

(see, U.S. Patent No. 6,036,872, column 2, lines 21-27). Clearly, with a vacuum in the cavity 16, there is no material/gas in the cavity to cause the cavity 16 to expand or contract with temperature. Further, and again with respect to the embodiment of Figures 1a and 1b, the present specification states “[w]afers 13 and 14 are of the same material, such as silicon, thereby having the same coefficients of thermal expansion”. (see, U.S. Patent No. 6,036,872, column 2, lines 12-14). Thus, in the embodiment of Figures 1a and 1b, there is nothing in the coefficients of thermal expansion of wafers 13 and 14 that would cause the cavity 16 to expand or contract

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with temperature. In view thereof, it is believed that the originally-filed disclosure would clearly convey to one having ordinary skill in the art that Applicants had possession of the concept of an apparatus with a sealed chamber, wherein the volume of the chamber remains relatively constant over the desired operating temperature range of the one or more devices, as recited in claim 65. In view thereof, Applicants believe that claim 65 fully complies with 35 U.S.C. § 112, first paragraph.

On page 3 of the Office Action, the Examiner rejected claims 59, 62 and 65 under 35 U.S.C. § 102(e) as being anticipated by Harris et al. (U.S. Patent No. 5,865,417). With respect to independent claim 59, and even though Applicants respectfully disagree with the Examiner's rejection, Applicants have amended claim 59 to include the limitations of dependent claim 63. Because dependent claim 63 was only objected to as being dependent upon a rejected base claim (see page 5 of the Office Action), claim 59 is now believed to be in condition for allowance. Claim 62 is dependent from amended claim 59, as is thus also believed to be in condition for allowance.

With respect to claim 65, the Examiner states that the volume of the chamber of Harris et al., *as defined by the first and second wafer* [emphasis added] are asserted to remain relatively constant in that while membrane [14] may flex it is disclosed as mechanically coupled to a port [36]. The Examiner also states that the first and second wafer *per se* are not disclosed to be mechanically coupled to the membrane so as to effect the membrane volume to any measurable extend (citing Harris et al., column 6, lines 20-33).

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After careful review, Applicants must respectfully disagree. Harris et al. state “[t]he second die 22 has a well or other depression etched therein which is deep enough relative to the thickness of the die to leave the thin wall which functions as membrane 14” (see, Harris et al., column 6, lines 11-13). As can be seen, the membrane is not only mechanically coupled to the second wafer, it is actually part of the second wafer, which is contrary to the Examiner’s assertion. During the telephonic interview of July 8, 2004, the Examiner acknowledged that the membrane 14 is actually part of the second die 22, and that the rejection of claim 65 would be withdrawn.

On page 5 of the Office Action, the Examiner states that claims 1-58 are allowed. The Examiner also states that claims 60, 61, 63 and 64 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. As noted above, dependent claim 63 has been incorporated into amended claim 59, and claim 63 has been canceled without prejudice. Dependent claims 60, 61 and 64 are all dependent from amended claim 59. Thus, claims 60, 61 and 64 are all believed to be in condition for allowance.

Applicants have added newly presented claims 66-67. Newly presented claim 66 corresponds to objected to claim 60, but has been rewritten in independent form to include the limitations of previously presented claim 59. Newly presented claim 67 corresponds to objected to claim 61, but has been rewritten in independent form to include the limitations of previously

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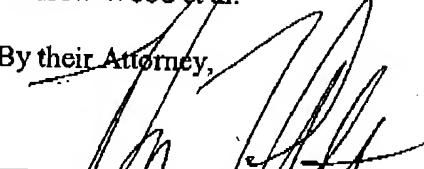
presented claim 59. As such, newly presented claims 66-67 are also believed to be in condition for allowance.

In view of the foregoing, all pending claims 1-62, 64-67 are believed to be in condition for allowance. Entry of the present amendment and reconsideration to that end is respectfully requested. If a telephone conference might be of assistance, please contact the undersigned attorney at (612) 359-9348.

Respectfully submitted,

Andrew Wood et al.

By their Attorney,

  
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Dated: July 28, 2004